

integrated
precondition
claim 1

- 5

10. The thin film magnetic recording head of claim 9 wherein the preconditioning gap is approximately .5 micron in width.

5 ^{Sub A} 11. A thin film magnetic recording head having a pair of gaps, one of said gaps being a write gap, said gaps being formed between three pole pieces, the center pole piece having a single thin film coil wrapped therearound and said center pole piece forming part of the magnetic circuit for each of said gaps.

12. The thin film magnetic recording head of claim 11 wherein the other of said gaps is a preconditioning gap, said preconditioning gap being wider than said write gap.

³ 13. The thin film magnetic recording head of claim ² 12 wherein said gaps are formed between a pole tip of each of said pole pieces, said pole tips having a pre-selected width, as desired.

⁴ 14. The thin film magnetic recording head of claim ² 12 wherein said pole pieces ~~are aligned, and~~ overlie each other and the coil in an integrated thin film structure.

5 ⁵ 15. The thin film magnetic recording head of claim ⁴ 14 wherein said structure includes a first pole piece P_1 , a substantially helically wound pancake coil overlying P_1 , a second pole piece P_2 overlying a portion of said coil and magnetically coupled to P_1 at a medial position thereof through a center of said coil, and a third pole piece P_3 overlying P_2 and magnetically coupled to an end thereof.

⁶ 16. The thin film magnetic recording head of claim ⁵ 15 wherein P_3 is magnetically coupled to P_2 through a portion of P_1 .

⁷ 17. The thin film magnetic recording head of claim ⁵ 15 wherein P_3 is magnetically coupled to P_1 at an end thereof to substantially surround P_2 and the coil between them.

19. The magnetic recording head of claim 18 wherein said head comprises a write gap aligned with said preconditioning gap.

20. The magnetic recording head of claim 19 wherein said preconditioning gap is wider than said write gap.

21. The magnetic recording head of claim 20 wherein each of said gaps comprise a pair of pole pieces, with one of each pair of said pole pieces being magnetically energized.

22. The magnetic recording head of claim 21 wherein said gaps share a common pole piece, said head thereby having three pole pieces to form said two gaps.

23. The magnetic recording head of claim 20 wherein said pairs of pole pieces surround a portion of a single coil, said single coil thereby energizing both of said gaps.

24. The magnetic recording head of claim 22 wherein said pole pieces comprise a first pole piece, a second pole piece having a single coil wrapped therearound and having an end thereof magnetically coupled to the first pole piece, and a third pole piece having an end thereof magnetically coupled to the second pole piece.

25. The magnetic recording head of claim 24 wherein said head is a ring head.

26. A magnetic recording head having a write gap and an adjacent gap whose magnetic flux interacts with the write gap flux to produce an increased magnetic write field gradient.

27. The magnetic recording head of claim 26 further comprising a coil for magnetically energizing the adjacent gap.

28. The magnetic recording head of claim 26 wherein the same coil energizes both the write gap and the adjacent gap.

29. A magnetic recording head with an integrally formed preconditioning gap adjacent a write gap.

Add
1A2-1

0802278.032197
26 FEB 82